

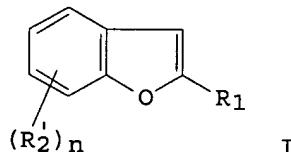
L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 1994:41595 CAPLUS
 DN 120:41595
 ED Entered STN: 22 Jan 1994
 TI Electroluminescent elements
 IN Takahashi, Toshihiko; Oota, Masabumi; Oonuma, Teruyuki; Sakon, Hirota; Yamaguchi, Takehito
 PA Ricoh Kk, Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM H05B033-14
 ICS C09K011-00; C09K011-06; G09F009-30
 CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 05109485	A2	19930430	JP 1991-296505	19911015 <--
PRAI JP 1991-296505		19911015		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05109485	ICM	H05B033-14
	ICS	C09K011-00; C09K011-06; G09F009-30
	IPCI	H05B0033-14 [ICM,5]; C09K0011-00 [ICS,5]; C09K0011-06 [ICS,5]; G09F0009-30 [ICS,5]

OS MARPAT 120:41595
 GI



AB The element comprises a pair of electrode layers and > 2 organic compound layers, wherein the phosphor layer contains a furan compound I [R1, R'1 = H, halo, (substituted) alkyl, unsat. alkyl, (substituted) aryl, (substituted) alkoxy, alkoxy carbonyl, (substituted) NH2, CN; n = 1-4]. The element provides a long-life low-threshold luminous phosphor.
 ST electroluminescent luminous furan deriv phosphor
 IT Electroluminescent devices
 (furan derivative phosphors for, long-life low-threshold luminous)
 IT Phosphors
 (electroluminescent, furan derivs., long-life low-threshold luminous)
 IT 271-89-6, Benzofuran 1646-27-1 5834-24-2 25664-53-3 40350-12-7
 42998-95-8 63376-78-3 77234-10-7 92151-88-7 151619-12-4
 151619-13-5 151619-14-6 151619-15-7 151619-16-8 151619-17-9
 151619-18-0 151619-19-1 151619-20-4 151619-21-5 151619-22-6
 151619-23-7 151619-24-8 151619-25-9 151619-26-0
 RL: PRP (Properties)
 (electroluminescent phosphors from, long-life low-threshold luminous)
 RN 271-89-6
 RN 1646-27-1
 RN 5834-24-2
 RN 25664-53-3

RN 40350-12-7
RN 42998-95-8
RN 63376-78-3
RN 77234-10-7
RN 92151-88-7
RN 151619-12-4
RN 151619-13-5
RN 151619-14-6
RN 151619-15-7
RN 151619-16-8
RN 151619-17-9
RN 151619-18-0
RN 151619-19-1
RN 151619-20-4
RN 151619-21-5
RN 151619-22-6
RN 151619-23-7
RN 151619-24-8
RN 151619-25-9
RN 151619-26-0

L14 ANSWER 2 OF 3 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1993-178364 [22] WPIX
DNN N1993-136666 DNC C1993-079528
TI Electroluminescence device for large planar area - comprises anode and cathode and layer(s) of organic (opt. furan) cpd. between anode and cathode.
DC E13 L03 P85 U11
PA (RICO) RICOH KK
CYC 1
PI JP 05109485 A 19930430 (199322)* 11 H05B033-14 <--
ADT JP 05109485 A JP 1991-296505 19911015
PRAI JP 1991-296505 19911015
IC ICM H05B033-14
ICS C09K011-06; G09F009-30
AB JP 05109485 A UPAB: 19931115
Device comprises the anode and cathode, and one layer or several layers of organic cpd. which are placed between the anode and cathode. Organic cpd. layer(s) comprises a layer consisting of fluorescent furan cpd.
Fluorescent furan cpd. pref. comprises the cpd. of formula (I), where R1 and R1' are each H, halogen, (substd.) alkyl, unsatd. alkyl, (substd.) aryl, (substd.) alkoxy, alkoxy-carbonyl, (substd.) amino, cyano; and n = 1-4.
USE/ADVANTAGE - For a large area plane luminescence item. High brightness luminescence can be achieved for longer time with lower operating voltage. Colours in various tone can be obtd.
Dwg. 4/4
FS CPI EPI GMPI
FA AB; GI; DCN
MC CPI: E25-E02; L03-H04A
EPI: U11-A15

L14 ANSWER 3 OF 3 JAPIO (C) 2006 JPO on STN
AN 1993-109485 JAPIO
TI ELECTROLUMINESCENCE ELEMENT
IN TAKAHASHI TOSHIHIKO; OTA MASABUMI; ONUMA TERUYUKI; SAKON HIROTA; YAMAGUCHI TAKEHITO
PA RICOH CO LTD
PI JP 05109485 A 19930430 Heisei
AI JP 1991-296505 (JP03296505 Heisei) 19911015
PRAI JP 1991-296505 19911015
SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1993
IC ICM H05B033-14
ICS C09K011-00; C09K011-06; G09F009-30

AB PURPOSE: To provide an EL element not changed with the high-intensity characteristic for a long period by forming at least one of multiple layers of organic compounds pinched between an anode and a cathode with a preset fluorescent furan compound.

CONSTITUTION: An electrode 2, a positive hole transport layer 3c and a luminescence layer 3a and an electron transport layer 3b made of organic compounds, and an electrode 4 are laminated on a base 1 to form an EL element. When at least one of the multiple organic compound layers is formed with the fluorescent furan compound expressed by the formula 1, the EL element having high intensity for a long period and easily manufactured is obtained, where R<SB>1</SB>, R<SB>1</SB>' indicate hydrogen atom, halogen atom, substituted or unsubstituted alkyl group, unsaturated alkyl group, substituted or unsubstituted allyl group, alkoxy carbonyl group, and (n) indicates a numeral of 1-4.

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